

Application No. 09/744,134
Filed: March 21, 2001
Group Art Unit: 1764

REMARKS

Claims 1-16 were pending in the instant application. Claims 2 and 14 are canceled. Claims 7-13 and 16 have been amended herein. Accordingly, claims 1, 3-13 and 15-16 will be pending upon entry of the amendments presented herein.

Support for the claim amendments can be found throughout the specification and claims as originally filed. No new matter has been added.

Amendments to and cancellation of the claims made herein were done solely to expedite prosecution of the present application, and are not to be construed as an acquiescence to any of the rejections/objections made in the instant Office Action or any Office Actions in the parent application. Applicant reserves the right to further prosecute the claims as originally filed or similar claims in this or one or more subsequent patent applications.

Firstly, Applicants note that since the Examiner in the current Office Action made no reference to the previous rejection of claims 2 and 14 under 35 U.S.C. §102, Applicants consider that this rejection has been withdrawn and a new rejection of claims 2 and 14 under 35 U.S.C. §103 has been made.

Claim Rejections - 35 U.S.C. §103

Claims 2 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Antos (U.S. Patent 4,036,743). Applicants respectfully traverse the foregoing rejection. But, for the purpose of expediting prosecution of the application, Applicants cancelled claims 2 and 14, thereby rendering the rejection to these claims moot. Applicants reserve the right to further pursue

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the claims as originally filed in this or a separate continuing application.

Claims 1, 3-13 and 15-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Antos (U.S. Patent 4,036,743). Additionally, Barr et al. (U.S. Patent 5,868,921) is cited "to illustrate that conventional hydrotreating catalysts include noble metals such as platinum." The Examiner points out that since Antos "teaches that the feed may be subjected to pretreatment including hydrotreating (column 14, lines 49-54), it would have been obvious to one of ordinary skill in the art at the time the invention was made to include treatment of Antos feed with a separate precious metal catalyst or precious metal/metal oxide in order to accomplish a hydrotreating pretreatment because Barre et al. illustrates that such a precious metal/metal oxide containing catalyst is effective for hydrotreating." Applicants respectfully traverse the foregoing rejection.

As previously argued, the present invention is directed to a process for the hydrogenation of a sulfur containing feedstock, having a sulfur content of less than 50 ppm. The hydrogenation process according to the invention involves separated catalytic components, the feedstock initially being contacted with a precious metal catalyst. The specific sequential steps involve contacting the feedstock with a precious metal catalyst, followed by contact with a metal oxide and a nickel catalyst, or contacting the feedstock with a mixture of a precious metal catalyst and metal oxide, followed by contact with a nickel catalyst. In contrast, Antos is directed to a single catalyst composite comprising 0.01 to 2 wt.% platinum group metal, 0.05 to 5 wt.% nickel, 0.01 to 5 wt.% bismuth, and 0.1 to 3.5 wt.% halogen, where

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the platinum, nickel and bismuth components are uniformly dispersed throughout the porous carrier material.

As provided in the Declaration of Bernard H. Reesink Under 37 U.S.C. §1.132 ("Reesink Declaration") submitted separately herewith, the different combination of catalytic components as well as the different sequential steps required in the presently claimed invention provide distinguishable results from the Antos patent such that it is not obvious to render the same results using the same components in a single catalyst or support. The catalyst of Example I in the Antos patent (U.S. Patent 4,036,743) shown as Catalyst D in the Reesink Declaration was compared with the catalysts of the present invention shown as Catalysts A, B and C. The results indicate that Catalyst D of Antos deactivate immediately after only five pulses of tetralin and completely lost its activity after ten pulses of tetralin (see Reesink Declaration, ¶9, or Table 1). In contrast, the catalysts of the present invention retained more than 50% of its activity even after 25 pulses of tetralin providing far superior and unexpected results.

Moreover, Barr et al. fails to cure any deficiencies found in the Antos patent since merely showing an exemplary hydrotreatment with a noble metal such as platinum would not teach one of ordinary skilled artisan the entirety of the present invention in requiring the specific process steps or combination catalysts as claimed. Applicants hereby reiterate the arguments presented in the response to the prior Office Action. Not only does Barr et al. fail to teach hydrogenation of sulfur containing feedstock using the method as claimed in the present invention, it also fails to teach or suggest the specific catalytic components used in the present invention. Barr et al. describes using a stacked

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bed of two hydrotreating catalysts, where the upper catalyst comprises 0.1 to 15 wt.% platinum and/or palladium and 2 to 40 wt.% of at least one of the following - tungsten, chromium, a Group VIIB metal or a metal of the actinium series supported on an acidic refractory oxide carrier; and the lower catalyst comprises 1 to 15 wt.% of a non-noble Group VIII metal and 1 to 25 wt.% of a Group VIB metal on an amorphous inorganic refractory oxide carrier. (See U.S. Patent 5,868,921, column 2, lines 22-44.) Barr et al. fails to teach or suggest the specific catalysts used for the hydrogenation of sulfur containing feedstock in the present invention.

None of the cited references, alone or in combination, teaches or suggests the invention as claimed herein. "[I]denfication in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention.... Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant." *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000). The combination of the cited references provides no requisite motivation to combine or the teaching to be able to come up with the claimed invention. Therefore, Applicants respectfully request reconsideration and withdrawal of the foregoing rejection.

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CONCLUSION

Based on the foregoing, Applicant respectfully requests reconsideration of the pending claims and allowance of the application.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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Enclosure: Declaration of Bernard H. Reesink Under 37 U.S.C. §1.132
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